FINAL REMOVAL ACTION REPORT

PAUL'S TANK CLEANING SITE 1225 INDUSTRIAL BOULEVARD HAINESPORT, BURLINGTON COUNTY, NEW JERSEY

Prepared by:

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Prepared for:

U.S. Environmental Protection Agency Region II - Removal Action Branch Edison, New Jersey 08837

DC No.: RST 2-02-F-1562 TDD No: TO-0017-0007 EPA Contract No.: EP-W-06-072

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1.0 INTRODUCTION

This Final Removal Action Report was prepared to summarize the general chronology of activities conducted during the U.S. Environmental Protection Agency, Region II (EPA) Removal Action at the Paul's Tank Cleaning Site (the Site) located in Hainesport, Burlington County, New Jersey (NJ). The EPA Removal Action was conducted at the Site between April and September, 2010. The objectives of the EPA Removal Action were to implement site security; to remove and dispose of all on-site tanks, tank trailers, and drums associated with historical operations; to remove and dispose of grossly-contaminated soil present on the Site; and to complete repairs and extend the existing fence so that it surrounds the entire property.

2.0 BACKGROUND

The Site is located at 1225 Industrial Boulevard in Hainesport, Burlington County, NJ. The geographic coordinates of the Site, as measured from its approximate center, are 39° 58' 39" north latitude and 74° 48' 53" west longitude. The approximately 3-acre Site is bordered to the southwest by a vacant industrial property; to the north and northwest by wooded areas; and to the east and southeast by a commercial park (see Attachment A, Figure 1, Site Location Map). The nearest residence is located approximately 1,000 feet southwest of the Site and an estimated 2,280 people live within one radial mile.

An oil tank cleaning company formerly conducted operations on the Site. The company cleaned-out oil tanks at schools, factories, and ships. Prior to initiating the EPA Removal Action, the Site was documented as containing aboveground storage tanks (ASTs), tanker trucks, drums, visually-contaminated soils, and a former lagoon. In August, 1994, EPA conducted an initial investigation of the Site. As part of the initial investigation, EPA's Technical Assistance Team (TAT) contractor collected soil, sludge, and waste samples from the Site. Analytical results of the 1994 sampling indicated the presence of polychlorinated biphenyls (PCBs) in a sludge sample collected from the Site at a concentration of 69 parts per million (ppm). Although the Site was reportedly abandoned and accessible, it was reported that there were no signs of trespassing. A health consultation prepared by the Agency for Toxic Substances and Disease Registry on September 27, 1994 stated that the sampling data did not pose a public health threat.

In July, 2008, the EPA Removal Action Branch (RAB) received a verbal request from the New Jersey Department of Environmental Protection (NJDEP) to evaluate the Site to determine if a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Removal Action was warranted. On November 3, 2008, EPA received a formal written request from the NJDEP requesting assistance with the investigation of the Site.

Pursuant to the NJDEP's request, the RAB's Removal Assessment and Enforcement Section (RAES) conducted a Removal Assessment of the Site which included site visits in August and October 2008. The objectives of the 2008 Removal Assessment were to determine current Site conditions, investigate the contents of on-site containers, and to investigate stained soil located throughout the Site. During the Removal Assessment, security measures which had previously been installed by the Town of Hainesport, NJ (i.e. concrete barriers and fencing) were found to be breached in several locations, and there was evidence that the Site was being utilized for recreational activities such as paintball and the riding of all-terrain vehicles (ATVs). In addition, during the Site visits 15 tanks and/or tank trucks (Tank 1 through Tank 15) were observed on the

Site, many of which were observed with their hatches open or easily accessible and many of the tanks had released or were in the process of releasing the waste sludge and waste oil contained within them. Furthermore, there was waste oil sludge present on the ground underlying at least eight of the tanks, one of which was observed to have had a release of waste oil between EPA's Site visits in August and October 2008. There were also two trailers observed on the Site which were documented as containing four 55-gallon drums of oil, several hundred eight-ounce jars of an industrial hand cleaner, and several crushed and/or opened five-gallon pails of roofing tar.

In August 2008, as part of the 2008 Removal Assessment, Weston Solutions, Inc., Removal Support Team 2 (RST 2), conducted on-site sampling activities at the Site. RST 2 was able to open 14 of the 15 on-site tanks and collected material from eight of the tanks. Tank 3 could not be opened by RST 2. Oil samples were collected from Tank 4, Tank 5, Tank 6, Tank 7, and Tank 12 and aqueous samples were collected from Tank 11, Tank 13, and Tank 15. Four of the five oil samples were field screened by RST 2 using Clor-N-Oil[®] (50 ppm) PCB test kits. One of the four oil samples indicated a PCB concentration above 50 ppm. Due to the viscosity of the oil, two of the other tests were inconclusive.

In September 2008, RST 2 mobilized to the Site to collect a sample from the contents of Tank 12 which had released contents onto the ground surface. One sludge sample was collected from around the leaking tank and submitted for target compound list (TCL) volatile organic compound (VOC), semivolatile organic compound (SVOC), pesticide, and PCB analyses and target analyte list (TAL) metals and ignitability analyses by RST 2 personnel.

In October 2008, as part of the Removal Assessment, RST 2 mobilized to the Site to collect additional waste/oil/sludge samples and soil samples from various locations around the Site. The additional samples were submitted for TCL VOC, SVOC, pesticide, and PCB analyses and TAL metals and toxicity characteristic leaching procedure (TCLP) metal analyses.

The analytical results of the September and October 2008 Removal Assessment sampling event indicated the presence of elevated concentrations of TCL VOCs, SVOCs, PCBs, and metals in on-site source areas, including on-site soil.

In April and July 2010, the EPA conducted additional Removal Assessment sampling activities at the Site. The objective of the April and July 2010 sampling events was to determine if elevated concentrations of contaminants were present in on-site surface and subsurface soil. As part of the additional sampling events, RST 2 advanced 86 soil borings throughout the Site and collected a total of 195 soil samples from the advanced soil borings. The soil samples were submitted for various analyses, including TCL VOCs, SVOCs, pesticides, and PCBs analyses and TAL metals, plus mercury, and TCLP metals. Elevated concentrations of contaminants were detected in the on-site soil, which included several concentrations which exceeded the applicable NJDEP non-residential direct contact soil remediation standard. For detailed information regarding the Removal Assessment of the Site refer to the Sampling Trip Report for the Paul's Tank Cleaner Site, submitted to the EPA on January 11, 2011, under TDD No.: TO-0017-0008 and DC No.: RST 2-02-F-1423.

On April 5, 2010, EPA initiated a Removal Action at the Site. As part of the Removal Action, the EPA's Emergency and Rapid Response Services (ERRS) contractor removed and disposed of oil product, waste materials, and associated tanks, pipelines, drums, and containers located

throughout the Site. In addition, the ERRS contractor removed and disposed of grossly-contaminated surface soil present on the Site and demolished on-site trailers and the on-site building.

3.0 GENERAL SCOPE OF WORK

The Removal Action conducted at the Site was documented by EPA's RST 2 contractor and all work was conducted by EPA's ERRS contractor, unless stated otherwise. As part of this report, Attachment A contains a Site Location Map; Attachment B contains the Photographic Documentation Log documenting major site activities; Attachment C contains EPA's Pollution Reports; and Attachment D contains the ERRS-generated Analytical Results and Waste Streams Table.

On April 5, 2010, EPA initiated the Removal Action by mobilizing the ERRS contractor to the Site. The scope of work for the Removal Action included the ERRS contractor removing and disposing of oil product, waste materials, and associated tanks, pipelines, drums, and containers located throughout the Site. In addition, the ERRS contractor was tasked with the removal and disposal of grossly-contaminated surface soil present on the Site and the demolition of on-site trailers and the on-site building. EPA's RST 2 contractor mobilized to the Site on April 12, 2010 to document Site activities. RST 2 was tasked with providing cleanup oversight, photodocumentation, and air monitoring as needed throughout the project's duration (Refer to Attachment B, Removal Action Photographic Log).

During the Removal Action, oil/waste samples were collected from existing tanks and drums. The samples were submitted for laboratory analysis to determine if hazardous materials were present (Refer to Attachment D, Analytical Results and Waste Streams Table). Samples that contained hazardous materials, as defined by the Resource Conservation and Recovery Act (RCRA) and/or the Toxic Substances Control Act (TSCA), were disposed of accordingly and documented on hazardous waste manifests. Wipe samples were also collected and analyzed to confirm that the tanks were free of contamination and acceptable for recycling as scrap metal. Air monitoring was conducted by RST 2 prior to tank entry, tank cutting, and sampling activities. Monitoring results were used to determine the presence or absence of existing volatile organic vapors, oxygen levels, lower explosive limit (LEL), hydrogen sulfide, carbon monoxide, and the subsequent level of personal protection required.

4.0 CHRONOLOGY

April 2010

- During the week of April 5, 2010, EPA's ERRS contractor, Shaw Environmental, Inc., mobilized site support facilities and initiated site security at the Site. In addition, as part of the Removal Assessment of the Site, RST 2 conducted sub-surface soil sampling in an effort to characterize the earthen berms known to be surficially contaminated with PCBs.
- On April 16, 2010, ERRS personnel began cutting and clearing the overgrowth of trees
 and shrubs on the Site in order to create an ample workspace. ERRS personnel also
 began staging grossly-contaminated surface tar/oil and associated soil present on the Site.

 On April 20, 2010, ERRS personnel began collecting samples from stockpiled soils for PCB analysis to determine disposal categorization. Some of the analytical results indicated the presence of PCBs at concentrations above TSCA regulations.

May 2010

- On May 4, 2010, RST 2 personnel collected soil samples for the ERRS contractor after tar with known TSCA-regulated PCB contamination had been removed and staged.
- On May 5, 2010, an ERRS sub-contractor, Op-Tech Environmental Services, Inc., began
 mobilization of equipment to the Site. Op-Tech Environmental Services, Inc. was tasked
 with staging and opening the tanks located throughout the Site. The tanks were cut open
 using shears and torches.
- On May 6, 2010, ERRS begins dismantling Tank 15 and staging the steel for off-site disposal.
- On May 10, 2010, ERRS began sampling the tanks opened by Op-Tech Environmental Services, Inc. The analytical results of the tank sampling can be found in Attachment D, Analytical Results and Waste Streams Table.
- On May 12, 2010, ERRS began cleaning oil and debris from the on-site tanks and staging it on plastic sheeting and in drums. Tank 1, Tank 2, and Tank 5 were all cleaned in this manner. The content characterization and volumes for Tank 1, Tank 2, and Tank 5 can be found in Attachment D, Analytical Results and Waste Streams Table
- On May 24, 2010, ERRS begins containerizing the contents which leaked out of Tank 8.
- On May 28, 2010, ERRS began installing fencing around the unfenced areas located on the northeast and southeast portion of the Site.

June 2010

- On June 9, 2010, an ERRS subcontractor, U. S. Environmental, mobilized to the Site to begin pumping out oil product from the remainder of the on-site tanks. The contents of Tank 3, Tank 7, Tank 9, Tank 11, Tank 12, and the first compartment of Tank 6 were categorized into the same waste stream, therefore allowing them to be pumped into the same totes.
- On June 10, 2010, ERRS began pumping out oil product from Tank 4, which was categorized as its own non-hazardous waste stream.

- On June 21, 2010, 880 gallons of metal and benzene-contaminated sludge and liquid hazardous waste; 5,940 gallons of metal and PCB-contaminated sludge and liquid hazardous waste; and 880 gallons of sludge and liquid non-hazardous waste was shipped to EQ Detroit for disposal under Manifest Nos. 007179033 JJK and 007179036 JJK. In addition, 37 kilograms of RCRA/TSCA regulated debris with free liquids, containing PCBs/benzene; 130 kilograms of RCRA/TSCA regulated solids, containing PCBs/benzene; and 581 kilograms of RCRA/TSCA regulated sludge and 74 kilograms of RCRA/TSCA regulated debris, containing PCBs/benzene, were shipped to Veolia Environmental Services for disposal under Manifest No. 007179037 JJK.
- On June 22, 2010, ERRS began pumping out oil product from Tank 6B and Tank 14.
- On June 24, 2010, ERRS began pumping out oil product from Tank 10 which was determined to have a flash point of 70.
- On June 25, 2010, 9,020 gallons of liquid hazardous waste, containing lead/benzene;
 5,995 gallons of liquid hazardous waste, containing lead/chromium; and 1,925 liquid flammable waste, containing benzene/toluene, was shipped to EQ Detroit for disposal under Manifest Nos. 003487002 FLE, 003487003 FLE, 003487009 FLE, and 003487010 FLE.

July 2010

• On July 26, 2010, 165 gallons of liquid hazardous waste, containing lead/benzene, was shipped to EQ Detroit for disposal under Manifest No. 003487021 FLE.

August 2010

- On August 24, 2010, one 55-gallon drum of non-DOT regulated groundwater and one 55-gallon drum of non-DOT regulated materials was shipped to Clean Harbors Environmental Services for disposal.
- On August 31, 2010, an estimated 20,884 kilograms of TSCA regulated soils, containing PCBs, was shipped to Wayne Disposal for disposal under Manifest No. 007797274. In addition, an estimated 75 tons of petroleum-contaminated solids was shipped to Pure Earth Recycling (NJ), Inc. for disposal under Manifest Nos. 316163, 316164, and 316165.

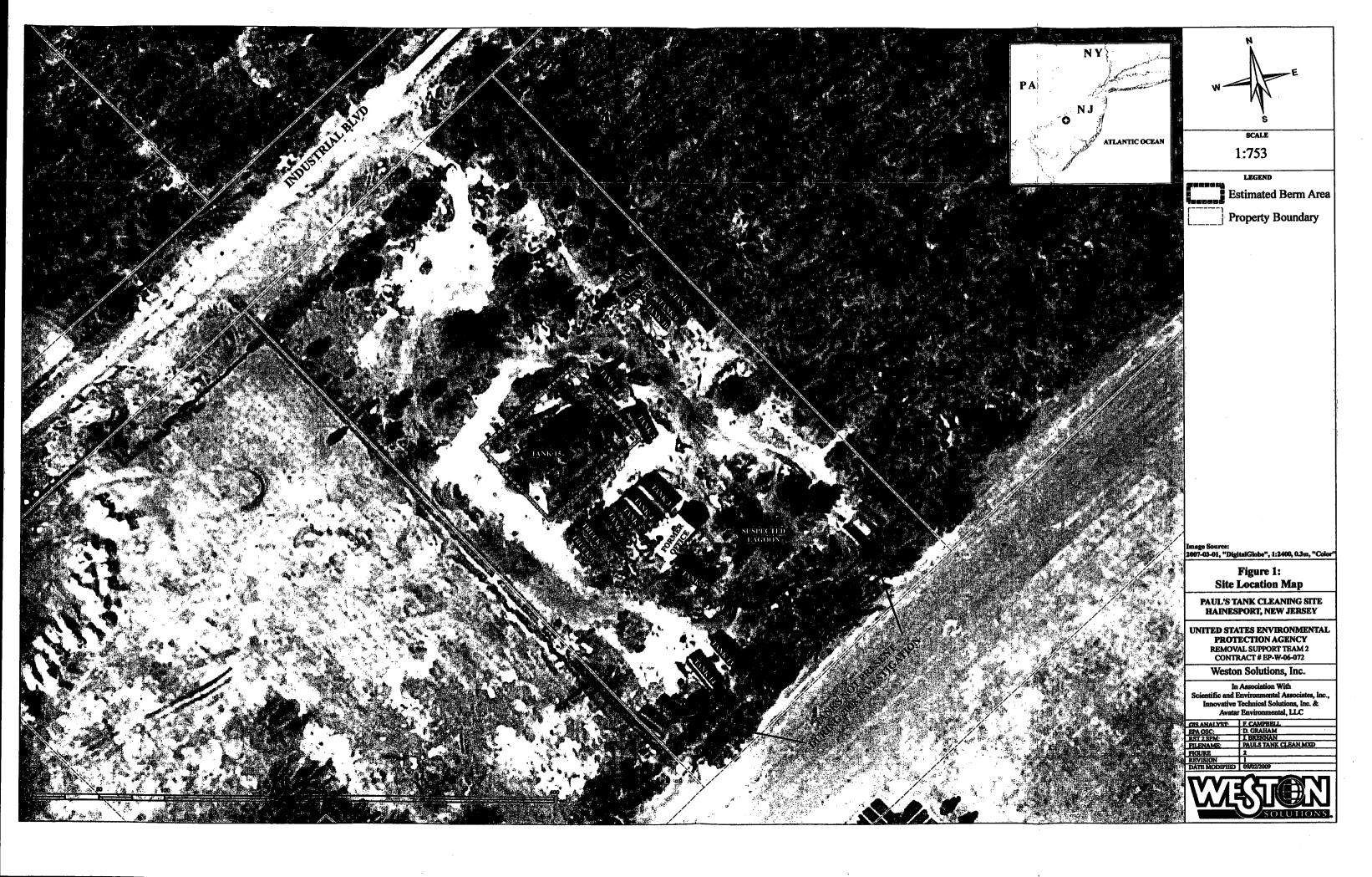
September 2010

On September 1, 2010, 220 gallons of liquid hazardous waste, containing PCBs/lead/chromium; 55 gallons of liquid flammable waste, containing naphthalene; 770 gallons of liquid hazardous waste, containing lead/benzene; and 5,610 gallons of liquid non-hazardous waste were shipped to EQ Detroit for disposal under Manifest Nos. 007797130 JJK and 007797135 JJK. In addition, 500 pounds of solid hazardous waste, containing lead/benzene; and 30 cubic yards of non-hazardous solid waste was shipped to Wayne Disposal for disposal under Manifest No. 007797275 JJK and Waste Tracking No. 08312010-T.

• On September 2, 2010, 44,000 pounds of non-hazardous solid waste was shipped to Wayne Disposal for disposal under Waste Tracking No. 144A. In addition, 25 tons of petroleum-contaminated solids were shipped to Pure Earth Recycling (NJ), Inc. for disposal under Manifest No. 316166.

For additional information regarding Removal Action activities conducted at the Site refer to Attachment C, Pollution Reports.

ATTACHMENT A FIGURE 1 – SITE LOCATION MAP



ATTACHMENT B REMOVAL ACTION PHOTOGRAPHIC LOG



View facing west of Tank 1 and Tank 2 prior to them being demolished and removed from the Site.



View facing west of Tank 3, Tank 4, and Tank 5 prior to them being demolished and removed from the Site.



View facing south of Tank 6 prior to it being demolished and removed from the Site.



View facing north of Tank 7 and the former office prior their demolition.



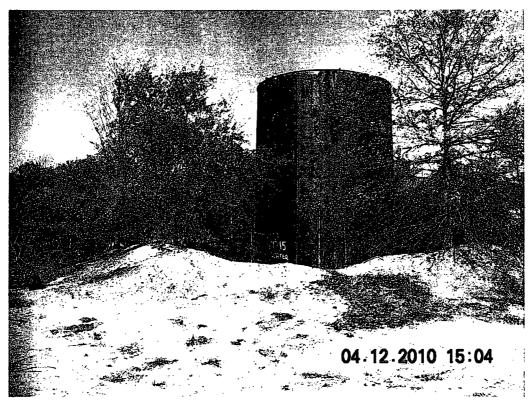
View facing north of Tank 8, Tank 9, and Tank 10 prior to them being demolished and removed from the Site.



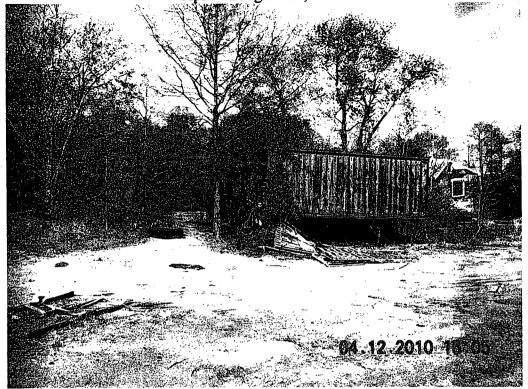
View facing east of Tank 11 and Tank 12 prior to them being demolited and removed from the Site.



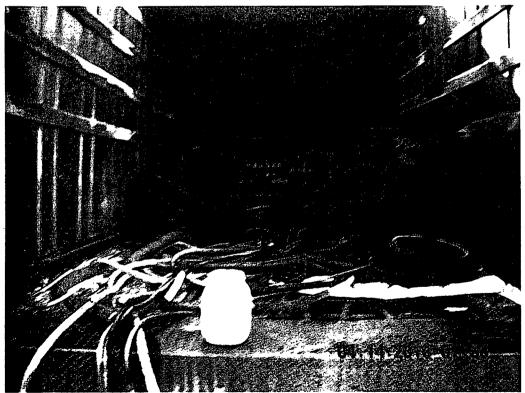
View facing southeast of Tank 13 and Tank 14 prior to them being demolited and removed from the Site.



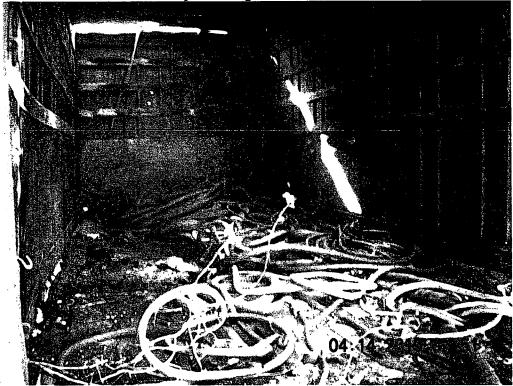
View facing southeast of Tank 15 prior to it being demolited and removed from the Site.



View of truck trailers prior to them being demolited and removed from the Site.



View inside of Trailer-1 which contained three drums, stacks of suspected industrial hand cleaner, hoses, and tires.



View inside of Trailer-2 which contained hoses.



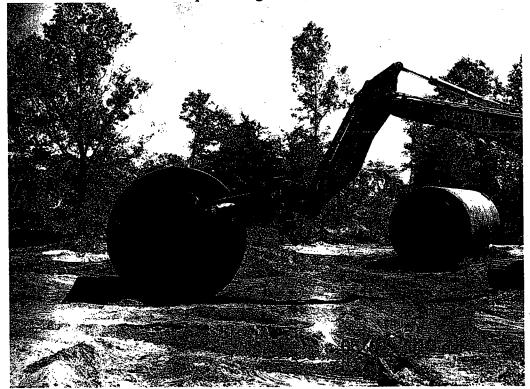
View of sludge present beneath Tank 11. Some other areas around the Site also had sludge/oil present on the ground surface.



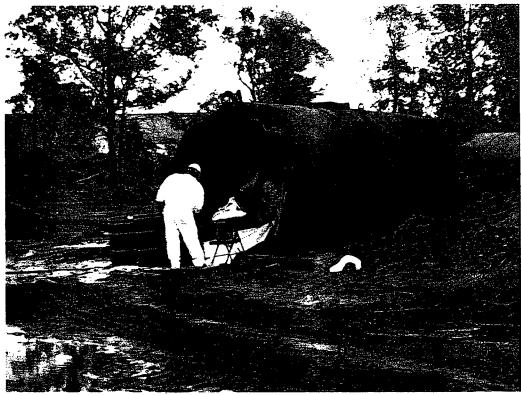
View of soil/sludge stockpile. Different stockpiles were created around the Site from grossly-contaminated surface soil.



View of the demolition of Tank 15.



View of a tank being opened using sheers.



View of Tank 5 being cleaned prior to its removal from the Site. This tank contained PCBs at a concentration of 540 ppm.



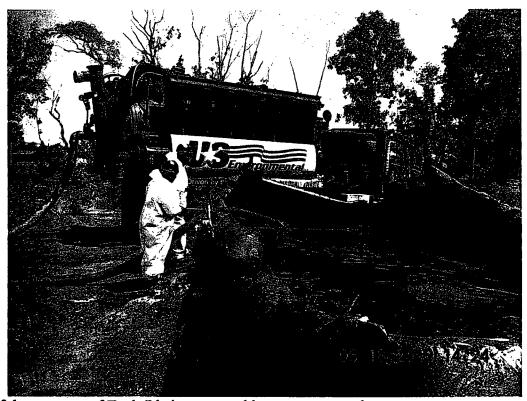
View of stockpile of piping found within Tank 1 and Tank 2.



View of the ERRS crew cleaning Tank 8 prior to its removal from the Site.



View of staged 55-gallon drums from Tank 1, Tank 2, and Tank 5.



Viewo f the contents of Tank 7 being pumped into a vactor truck.



View of the contents of a vactor truck being emptied into 330-gallon totes.



View of ERRS crew cleaning out Tank 11.



View of the berm after all tanks had been demolished and removed from the Site.

ATTACHMENT C

POLLUTION REPORTS

U.S. ENVIRONMENTAL PROTECTION AGENCY POLLUTION/SITUATION REPORT Paul's Tank Cleaning - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region II

Subject:

POLREP #1

Initial

Paul's Tank Cleaning

CU

Hainesport, NJ

Latitude: 39.9776000 Longitude: -74.8149000

To:

From:

Don Graham, OSC

Date:

4/16/2010

Reporting Period: 2/12/10 thru 4/16/10

1. Introduction

1.1 Background

Site Number:

CU

Contract Number:

EP-56-07-02

D.O. Number:

0035

Action Memo Date:

9/30/2009

Response Authority: CERCLA

0055

Response Type:

Time-Critical

Response Lead:

EPA

Incident Category:

Removal Action

NPL Status:

Non NPL

Operable Unit:

3/2/2010

Mobilization Date:

Demob Date:

4/5/2010

Start Date:

Completion Date:

CERCLIS ID:

NJD980772560

RCRIS ID:

ERNS No.:

State Notification:

FPN#:

Reimbursable Account #:

1.1.1 Incident Category

Removal Action

1.1.2 Site Description

In July 2008, the EPA Removal Action Branch ("RAB") received a verbal request from the New Jersey Department of Environmental Protection ("NJDEP") to evaluate the Site for a CERCLA removal action. The NJDEP's verbal request was formalized with a written request dated November 3, 2008.

Pursuant to the NJDEP's request, the RAB's Removal Assessment and Enforcement Section ("RAES") conducted a removal assessment which included Site visits in August and October of 2008. During this assessment, security measures which had previously been installed by the Township of Hainesport (i.e. concrete barriers and fencing) were found to be breached in several locations, and there was evidence that the Site was being utilized for recreational activities such as paintball and the riding of all-terrain vehicles (ATVs). Furthermore, there are 15 tanks and/or tank trucks present at the Site; many of the hatches are open or easily accessible and many of the tanks have released or are in the process of releasing the waste sludge and waste oil contained within them. There is waste oil sludge present on the ground underlying at least eight of the tanks, one of which was observed to have had a release of waste oil between EPA's Site visits in August and October 2008. There are also two trailers at the Site which were found to contain four 55-gallon drums of oil, several hundred eight-ounce jars of an industrial hand cleaner, and several crushed and/or opened five-gallon pails of roofing tar.

1.1.2.1 Location

The Site consists of a three-acre parcel of land (Block 96, Lot 1.07) located at 1225 Industrial Boulevard in Hainesport Township, Burlington County, New Jersey. Industrial Boulevard, which runs between Hainesport-Lumberton Road and a jug-handle for Route 38, is no longer a public road and has been closed off with concrete barriers. The Site is bordered to the southwest by a vacant industrial property; to the north and northeast by woods, which are scheduled for clearing and development in the near future; and to the east and southeast by a commercial park. A Verizon facility is situated at the end of Industrial Boulevard at Hainesport-Lumberton Road. The nearest residence is located approximately 1,000 feet southwest of the Site and an estimated 2,280 persons live within one mile of the Site. Route 38, located approximately 1,500 feet from the Site, contains numerous strip malls and commercial establishments.

1.1.2.2 Description of Threat

Fifteen (15) ASTs and soil contaminated with PCBs, lead, pesticides, and non-petroleum related volatile organic compunds.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results During EPA's Site visit on August 27, 2008, oil samples were collected from five of the tanks and aqueous samples were collected from three of the tanks. One oil sample was screened with a Chlor-N-Oil test kit and was positive for polychlorinated biphenyls (PCBs) at greater than 50 ppm. Most of the tanks were found to contain organic vapor readings above background levels. During the period of October 7-9, 2008, EPA collected 23 soil samples from 10 biased locations throughout the Site where either sludge or discolored soil was present. The analyses for these samples generally included the full scan covered by the Target Analyte List and the Target Compound List (not including herbicides), Toxicity Characteristic Leachate Procedure metals for the oil and sludge, and a limited number of Ignitability analyses for the oil and drums. The analytical results of these sampling events revealed the presence of elevated levels of lead. PCBs, and a variety of pesticides and non-petroleum related volatile organic compounds. The highest concentration of lead detected in sludge that had released from a tank onto the ground surface was 623 mg/kg. A sample collected from a hardened sludge that covers much of the berm around the vertical tank (Tank No. 15) near the center of the Site was found to contain a PCB concentration of 320 mg/kg and several non-petroleum organic compounds such as: 2, 4dinitrotoluene (5.5 mg/kg); 3,3'-dichlorobenzidene (2.2 mg/kg); 1,2,4,5-tetrachlorobenzene (1.6 mg/kg); and 4,4'-DDT (10 mg/kg).

Low levels of non-petroleum VOCs, including acetone, 1,1-dichloroethene, carbon tetrachloride, trichloroethene, tetrachloroethene, and 1,3-dichlorobenzene were identified in soil samples throughout the Site. Elevated levels of SVOCs were identified in most of the soil

samples collected at the Site and include naphthalene (32 mg/kg), acenaphthene (76 mg/kg), phenanthrene (420 mg/kg), anthracene (98 mg/kg), fluoranthene (470 mg/kg), pyrene (350 mg/kg), benzo(a)anthracene (190 mg/kg), chrysene (170 mg/kg), and benzo(a)pyrene (150 mg/kg). Elevated levels of VOCs and SVOCs were detected in subsurface soils at the location of the former lagoon. The compounds with the highest concentrations included 1,1,1-trichloroethane (2.4 mg/kg), toluene (20 mg/kg), ethylbenzene (12 mg/kg), xylene (91 mg/kg), and styrene (46 mg/kg).

PCBs were identified in most of the soil samples collected at the Site, with the maximum concentration identified being 2.3 mg/kg. As a point of comparison, of the 23 soil samples collected, 12 samples exceeded the NJDEP Soil Remediation Standard for PCBs for direct contact in a residential setting (0.2 mg/kg) and five samples exceeded the standard for a non-residential setting (1 mg/kg). The EPA Region III Risk-Based Concentration for PCBs corresponding to a lifetime cancer risk of one in one million for residential and industrial soil settings is 0.32 mg/kg and 1.4 mg/kg, respectively.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

On March 2, 2010, the OSC and ERRS Response Manager conducted a Site inspection to determine the resources needs for the removal action.

During the week of Apirl 5, 2010, EPA's ERRS contractor mobilized site support facilities and initiated Site security. RST conducted sub-surface soil sampling in an effort to characterize the earthen berms known to be surficially contaminated with PCBs.

During the week of April 12, 2010, ERRS initiated on-site activities including the scraping and consolidation of visibly contaminated surface soils, and the clearing of vegetation and debris.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)
Request for Information Letters are currently being drafted and will be sent to any currently identified PRPs.

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal			
N/A								
	·				·			
		·						

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

This removal action will address the removal of all on-site tanks, tank trailers, drums, and grossly contaminated surface soils throughout the Site. Also, the existing fence will be repaired and extended to encompass the entire Site to minimize trespassing and prevent the potential for direct contact with residually contaminated soils.

2.2.1.2 Next Steps

ERRS will be completing Site preparation activities, including the consolidation and stockpiling of visibly contaminated surface soils and the clearing of debris and vegetation as needed. Once the required resources have been subcontracted, ERRS will initiate the dismantling, cleaning and decontamination of all tanks and tank trailers on-site.

2.2.2 Issues

None

2.3 Logistics Section

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$600,000.00	\$75,000.00	\$525,000.00	87.50%
TAT/START	\$75,000.00	\$5,000.00	\$70,000.00	93.33%
Intramural Costs				
USEPA - Direct	\$150,000.00	\$8,000.00	\$142,000.00	94.67%
USEPA - InDirect	\$300,768.00	\$16,000.00	\$284,768.00	94.68%
				·
Total Site Costs	\$1,125,768.00	\$104,000.00	\$1,021,768.00	90.76%

^{*} The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

- 2.5 Safety Officer
- 2.6 Liaison Officer
- 2.7 Information Officer
- 3. Participating Entities
 - 3.1 Unified Command

3.2 Cooperating and Assisting Agencies

4. Personnel On Site

ERRS

- (1) Response Manager
- (1) Field Cost Adminstrator
- (1) Foreman
- (1) Equipment Operator
- (2) Laborer

RST (1)

- 5. Definition of Terms
- 6. Additional sources of information
 - 6.1 Internet location of additional information/reports
 - **6.2 Reporting Schedule**
- 7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY POLLUTION/SITUATION REPORT Paul's Tank Cleaning - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region II

Subject:

POLREP #2

Paul's Tank Cleaning

CU

Hainesport, NJ

Latitude: 39.9776000 Longitude: -74.8149000

To:

From:

Don Graham, OSC

Date:

6/8/2010

Reporting Period: 4/16/10 through 6/8/10

1. Introduction

1.1 Background

Site Number:

CU

Contract Number:

EP-56-07-02

D.O. Number:

0035

Action Memo Date:

9/30/2009

Response Authority: CERCLA

Response Type:

Time-Critical

Response Lead: **NPL Status:**

EPA

Incident Category:

Removal Action

Non NPL

Operable Unit:

3/2/2010

Mobilization Date:

4/5/2010

Start Date:

Demob Date:

Completion Date:

CERCLIS ID:

NJD980772560

RCRIS ID:

ERNS No.:

State Notification:

FPN#:

Reimbursable Account #:

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Removal Action

1.1.2 Site Description

In July 2008, the EPA Removal Action Branch ("RAB") received a verbal request from the New Jersey Department of Environmental Protection ("NJDEP") to evaluate the Site for a CERCLA removal action. The NJDEP's verbal request was formalized with a written request dated November 3, 2008.

Pursuant to the NJDEP's request, the RAB's Removal Assessment and Enforcement Section ("RAES") conducted a removal assessment which included Site visits in August and October of 2008. During this assessment, security measures which had previously been installed by the Township of Hainesport (i.e. concrete barriers and fencing) were found to be breached in several locations, and there was evidence that the Site was being utilized for recreational activities such as paintball and the riding of all-terrain vehicles (ATVs). Furthermore, there are 15 tanks and/or tank trucks present at the Site; many of the hatches are open or easily accessible and many of the tanks have released or are in the process of releasing the waste sludge and waste oil contained within them. There is waste oil sludge present on the ground underlying at least eight of the tanks, one of which was observed to have had a release of waste oil between EPA's Site visits in August and October 2008. There are also two trailers at the Site which were found to contain four 55-gallon drums of oil, several hundred eight-ounce jars of an industrial hand cleaner, and several crushed and/or opened five-gallon pails of roofing tar.

1.1.2.1 Location

The Site consists of a three-acre parcel of land (Block 96, Lot 1.07) located at 1225 Industrial Boulevard in Hainesport Township, Burlington County, New Jersey. Industrial Boulevard, which runs between Hainesport-Lumberton Road and a jug-handle for Route 38, is no longer a public road and has been closed off with concrete barriers. The Site is bordered to the southwest by a vacant industrial property; to the north and northeast by woods, which are scheduled for clearing and development in the near future; and to the east and southeast by a commercial park. A Verizon facility is situated at the end of Industrial Boulevard at Hainesport-Lumberton Road. The nearest residence is located approximately 1,000 feet southwest of the Site and an estimated 2,280 persons live within one mile of the Site. Route 38, located approximately 1,500 feet from the Site, contains numerous strip malls and commercial establishments.

1.1.2.2 Description of Threat

Fifteen (15) ASTs and soil contaminated with PCBs, lead, pesticides, and non-petroleum related volatile organic compunds.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

During EPA's Site visit on August 27, 2008, oil samples were collected from five of the tanks and aqueous samples were collected from three of the tanks. One oil sample was screened with a Chlor-N-Oil test kit and was positive for polychlorinated biphenyls (PCBs) at greater than 50 ppm. Most of the tanks were found to contain organic vapor readings above background levels. During the period of October 7-9, 2008, EPA collected 23 soil samples from 10 biased locations throughout the Site where either sludge or discolored soil was present. The analyses for these samples generally included the full scan covered by the Target Analyte List and the Target Compound List (not including herbicides), Toxicity Characteristic Leachate Procedure metals for the oil and sludge, and a limited number of Ignitability analyses for the oil and drums. The analytical results of these sampling events revealed the presence of elevated levels of lead. PCBs, and a variety of pesticides and non-petroleum related volatile organic compounds. The highest concentration of lead detected in sludge that had released from a tank onto the ground surface was 623 mg/kg. A sample collected from a hardened sludge that covers much of the berm around the vertical tank (Tank No. 15) near the center of the Site was found to contain a PCB concentration of 320 mg/kg and several non-petroleum organic compounds such as: 2, 4dinitrotoluene (5.5 mg/kg); 3,3'-dichlorobenzidene (2.2 mg/kg); 1,2,4,5-tetrachlorobenzene (1.6 mg/kg); and 4,4'-DDT (10 mg/kg).

Low levels of non-petroleum VOCs, including acetone, 1,1-dichloroethene, carbon tetrachloride, trichloroethene, tetrachloroethene, and 1,3-dichlorobenzene were identified in soil samples throughout the Site. Elevated levels of SVOCs were identified in most of the soil samples collected at the Site and include naphthalene (32 mg/kg), acenaphthene (76 mg/kg), phenanthrene (420 mg/kg), anthracene (98 mg/kg), fluoranthene (470 mg/kg), pyrene (350 mg/kg), benzo(a)anthracene (190 mg/kg), chrysene (170 mg/kg), and benzo(a)pyrene (150 mg/kg). Elevated levels of VOCs and SVOCs were detected in subsurface soils at the location of the former lagoon. The compounds with the highest concentrations included 1,1,1-trichloroethane (2.4 mg/kg), toluene (20 mg/kg), ethylbenzene (12 mg/kg), xylene (91 mg/kg), and styrene (46 mg/kg).

PCBs were identified in most of the soil samples collected at the Site, with the maximum

concentration identified being 2.3 mg/kg. As a point of comparison, of the 23 soil samples collected, 12 samples exceeded the NJDEP Soil Remediation Standard for PCBs for direct contact in a residential setting (0.2 mg/kg) and five samples exceeded the standard for a non-residential setting (1 mg/kg). The EPA Region III Risk-Based Concentration for PCBs corresponding to a lifetime cancer risk of one in one million for residential and industrial soil settings is 0.32 mg/kg and 1.4 mg/kg, respectively.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

Prior to the mobilization of the tank dismantling subcontractor (OpTech) on May 5th -11th, ERRS completed site preparation activities including the clearing of vegetation and debris. Once the tanks were opened, ERRS completed a visual assessment of the materials contained within the tanks and collected samples from each of the tanks in order to determine volumes and initiate the coordination of tank cleaning and T&D options for the contents of the tanks.

Other activities undertaken include the demolition of the former office building, and the scraping and stockpiling of the TSCA regulated oils which coat the earthen berm around the former Tank #15.

Tank cleaning operations are ongoing; ERRS has completed the clean-out of Tanks 1, 2, 5, 8 and 15. Sludge being generated from cleaning operations are being drummed for T&D. Materials which can not be feasibly decontaminated (i.e. piping, steam coils) are being cleaned to the extent practicable and then prepared for bulk disposal as oily debris.

During the week of May 24-28, a fencing subcontractor completed the installation of approximately 750 linear feet of 6-foot chain link fence along the South and East perimeters of the Site. The Site is now entirely fenced; as the North and West perimeters were fenced prior to EPA's involvement at the Site.

Pending the coordination of T&D options for the estimated 8,000+/- gallons of oil impeding further tank cleaning operations, ERRS was demobilized from the Site on May 28th.

Having scheduled the pumping and transfer of the various oil waste-streams i(i.e. D001, D007, D008, D009, PCBs<50ppm, PCBs>50ppm, etc.), ERRS was remobilized to the Site on June 7th. Pumping operations are scheduled to begin on June 9th, and will involve the transfer of oils into a variety of containers including tank trailers, 330-gallon totes, and 55-gallon drums. Once the oils have been removed from the remaining ten ASTs and tank trailers, ERRS will resume and complete tank cleaning operations.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs) Request for Information Letters are currently being drafted and will be sent to any currently identified PRPs.

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity ¹	Manifest #	Treatment	Disposal
Non-hazardous	Debris	50 yards	•		
Non-hazardous	Steel	,			
Non-hazardous	Solids/Sludge	1,705 gallons	•		
Non-hazardous	Oil	2,500 gallons		**************************************	,
PCBs (<50 ppm)/					·

RCRA	Solids/Sludge	550 gallons		
PCBs (<50 ppm) /	Off	9,950 gallons		
RCRA	On	Significant Services		
PCBs (>50 ppm) /	Oil Solids/Sludge			
RCRA	Solids/Sludge	660 gallons		
PCBs (>50 ppm) / RCRA	Oil	110 gallons		

¹ Quantities are estimates pending shipment

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

This removal action will address the removal of all ASTs, tank trailers, drums, and grossly contaminated surface soils throughout the Site. The newly installed fencing will minimize trespassing and prevent the potential for direct contact with residually contaminated soils.

2.2.1.2 Next Steps

ERRS will finish cleaning and decontaminating all tanks and tank trailers on-site. The oil, sludge and other materials will be transported off-site for disposal, and the decontaminated steel will be transported off-site for recycling.

2.2.2 Issues

None

2.3 Logistics Section

2.4 Finance Section

2.4

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs		·		
ERRS - Cleanup Contractor	\$735,000.00	\$335,000.00	\$400,000.00	54.42%
TAT/START	\$75,000.00	\$30,000.00	\$45,000.00	60.00%
Intramural Costs				· · · · · · · · · · · · · · · · · · ·
USEPA - Direct	\$150,000.00	\$50,000.00	\$100,000.00	66.67%
USEPA - InDirect	\$300,768.00	\$100,000.00	\$200,768.00	66.75%
		•		
Total Site Costs	\$1,260,768.00	\$515,000.00	\$745,768.00	59.15%

- * The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.
- 2.5 Safety Officer
- 2.6 Liaison Officer
- 2.7 Information Officer
- 3. Participating Entities
 - 3.1 Unified Command
 - 3.2 Cooperating and Assisting Agencies
- 4. Personnel On Site

ERRS

- (1) Response Manager
- (1) Field Cost Adminstrator
- (1) Foreman
- (1) Equipment Operator
- (2) Laborer

RST (1)

- 5. Definition of Terms
- 6. Additional sources of information
 - 6.1 Internet location of additional information/reports
 - **6.2 Reporting Schedule**
- 7. Situational Reference Materials

U.S. ENVIRONMENTAL PROTECTION AGENCY POLLUTION/SITUATION REPORT Paul's Tank Cleaning - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region II

Subject:

POLREP #3

Paul's Tank Cleaning

CU

Hainesport, NJ

Latitude: 39.9776000 Longitude: -74.8149000

To:

From:

Don Graham, OSC

Date:

9/16/2010

Response Authority: CERCLA

Reporting Period: June 9,2010 thru September 2, 2010

1. Introduction

1.1 Background

Site Number:

CU

Contract Number:

EP-56-07-02

D.O. Number:

0035

Action Memo Date:

9/30/2009

Response Type:

Time-Critical

Response Lead:

EPA

Incident Category:

Removal Action

NPL Status:

Non NPL

Operable Unit:

4/5/2010

Start Date:

3/2/2010

Demob Date:

Mobilization Date:

9/2/2010

Completion Date:

9/2/2010

CERCLIS ID:

NJD980772560

RCRIS ID:

ERNS No.:

State Notification:

FPN#:

Reimbursable Account #:

1.1.1 Incident Category

Removal Action

1.1.2 Site Description

In July of 2008, the EPA Removal Action Branch ("RAB") received a verbal request from the New Jersey Department of Environmental Protection ("NJDEP") to evaluate the Site for a CERCLA removal action. The NJDEP's verbal request was formalized with a written request dated November 3, 2008.

Pursuant to the NJDEP's verbal request, the RAB's Removal Assessment and Enforcement Section ("RAES") conducted a removal assessment which included Site visits in August and October of 2008. During this assessment, there was evidence that the Site was being utilized for recreational activities such as paintball and the riding of all-terrain vehicles (ATVs). Furthermore, there were a total of fifteen tanks and/or tank trucks present at the Site, and many of the hatches were open and easily accessible. At least eight of the tanks had released or were in the process of releasing the waste oil & sludge contained within them.

1.1.2.1 Location

The Site consists of a three-acre parcel of land (Block 96, Lot 1.07) located at 1225 Industrial Boulevard in Hainesport Township, Burlington County, New Jersey. Industrial Boulevard, which runs between Hainesport-Lumberton Road and a jug-handle for Route 38, is no longer a public road and has been closed off with concrete barriers. The Site is bordered to the southwest by a vacant industrial property; to the north and northeast by woods, which are scheduled for clearing and development in the near future; and to the east and southeast by a commercial park. A Verizon facility is situated at the end of Industrial Boulevard at Hainesport-Lumberton Road. The nearest residence is located approximately 1,000 feet southwest of the Site and an estimated 2,280 persons live within one mile of the Site. Route 38, located approximately 1,500 feet from the Site, contains numerous strip malls and commercial establishments.

1.1.2.2 Description of Threat

Fifteen (15) unsecured and leaking aboveground storage tanks (ASTs) & tank trailers which contain oils & sludges contaminated with PCBs, heavy metals, and non-petroleum related volatile organic compounds.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

During EPA's Site visit on August 27, 2008, oil samples were collected from five of the tanks and aqueous samples were collected from three of the tanks. One oil sample was screened with a Chlor-N-Oil test kit and was positive for polychlorinated biphenyls (PCBs) at greater than 50 ppm. Most of the tanks were found to contain organic vapor readings above background levels.

During the period of October 7-9, 2008, EPA collected 23 soil samples from 10 biased locations throughout the Site where either sludge or discolored soil was present. The analytical results of these sampling events revealed the presence of elevated levels of lead, PCBs, and a variety of non-petroleum related volatile organic compounds. The highest concentration of lead detected in sludge that had released from a tank onto the ground surface was 623 mg/kg. A sample collected from a hardened sludge that covers much of the berm around the vertical tank (Tank No. 15) near the center of the Site was found to contain a PCB concentration of 320 mg/kg and several non-petroleum organic compounds such as: 2, 4-dinitrotoluene (5.5 mg/kg); 3,3'-dichlorobenzidene (2.2 mg/kg); 1,2,4,5-tetrachlorobenzene (1.6 mg/kg); and 4,4'-DDT (10 mg/kg).

Low levels of non-petroleum VOCs, including acetone, 1,1-dichloroethene, carbon tetrachloride, trichloroethene, tetrachloroethene, and 1,3-dichlorobenzene were identified in soil samples throughout the Site. Elevated levels of SVOCs were identified in most of the soil samples collected at the Site and include naphthalene (32 mg/kg), acenaphthene (76 mg/kg), phenanthrene (420 mg/kg), anthracene (98 mg/kg), fluoranthene (470 mg/kg), pyrene (350 mg/kg), benzo(a)anthracene (190 mg/kg), chrysene (170 mg/kg), and benzo(a)pyrene (150 mg/kg). Elevated levels of VOCs and SVOCs were detected in subsurface soils at the location of the former lagoon. The compounds with the highest concentrations included 1,1,1-trichloroethane (2.4 mg/kg), toluene (20 mg/kg), ethylbenzene (12 mg/kg), xylene (91 mg/kg), and styrene (46 mg/kg).

PCBs were identified in most of the soil samples collected at the Site, with the maximum concentration identified being 2.3 mg/kg. As a point of comparison, of the 23 soil samples collected, 12 samples exceeded the NJDEP Soil Remediation Standard for PCBs for direct contact in a residential setting (0.2 mg/kg) and five samples exceeded the standard for a non-residential setting (1 mg/kg). The EPA Region III Risk-Based Concentration for PCBs corresponding to a lifetime cancer risk of one in one million for residential and industrial soil settings is 0.32 mg/kg and 1.4 mg/kg, respectively.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

Tank pumping operations were initiated on June 9, 2010 with the mobilization of the vacuum truck subcontractor, U.S. Environmental. During the following weeks, all oily sludge was transferred from the six (6) ASTs and four (4) tank trailers containing significant oil residuals, to a variety of containers including 330-

gallon & 270-gallon totes, and 55-gallon drums. Upon removal of the oil from the ASTs and tank trailers, all tank cleaning and dismantling operations were completed and all totes and drums were staged pending transportation & disposal (T&D).

Prior to the demobilization of ERRS and Site support facilities on July 2, 2009, ERRS completed approximately 90% of all T&D operations. The remaining 10% of the waste was secured on-site pending a determination on the availability of sufficient funding.

After completing the transfer of \$20,000 in extramural funding from the RST contract, ERRS was remobilized to the Site on August 30 thru September 2, 2010 to complete the T&D of the remaining waste, and all activities within the scope of this removal action.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs) Request for Information Letters are currently being drafted and will be sent to any currently identified PRPs.

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Treatment	Disposal
Non-RCRA/TSCA	Metal Debris	55 yards	Sub C Landfill	Wayne Disposal
Non-RCRA/TSCA	Soil	111 tons	Landfill	Pure Earth
Non-RCRA/TSCA	Sludge	1,655 gallons	Incineration	EQ Detroit
RCRA Metals Contaminated	Sludge	15,650 gallons	Incineration	EQ Detroit
RCRA Metals with PCB UHC Contaminated	Sludge	58,163 pounds	Incineration	EQ Detroit
RCRA Flammable	Liquid	17,000+ pounds	Incineration	EQ Detroit
TSCA	Debris & Sludge	8 drums	Incineration	Veolia
TSCA	Soil	25 tons	Landfill	Wayne Disposal
RCRA Metals Contaminated	Debris	1 СҮВ	Macroencapsulation	MDI
Non-RCRA	Steel	82 tons	Recycled	Materials Management

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

All activities within the scope of this removal action have been completed.

2.2.1.2 Next Steps

Pending the receipt and evaluation of the analytical results for soil samples collected by RST in July 2009, a determination will be made as to the need for additional response actions (e.g. soil removal) which may be necessary outside the scope of this removal action.

2.2.2 Issues

None

2.3 Logistics Section

2.4 Finance Section

2.4

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$755,000.00	\$730,000.00	\$25,000.00	3.31%
TAT/START	\$55,000.00	\$45,000.00	\$10,000.00	18.18%
Intramural Costs				
USEPA - Direct	\$150,000.00	\$100,000.00	\$50,000.00	33.33%
USEPA - InDirect	\$300,768.00	\$230,768.00	\$70,000.00	23.27%
		•	-	
Total Site Costs	\$1,260,768.00	\$1,105,768.00	\$155,000.00	12.29%

^{*} The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

- 2.5 Safety Officer
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RST (1)

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ATTACHMENT D

ANALYTICAL RESULTS AND WASTE STREAMS TABLE (Generated by the ERRS Contractor)

	13	19	T1	T8	17	T11A	T118	T12	T6A	T10	T4	T2	T5	T14A	T14B	T14C	T14D	T14E	T6B	T13A	T13B	T13C	T13D	T13
Vaste Stream #	1	1	1	1	1	1	1	1	1	.1A	2	3	4	6	6	6	6	6	6			يحد	1	+ 123
Vaste Code	0018, 0007, 0008	D007, D008, D018	0008	D005, D006, D007, D018	D007, D008, D018	D007, D008, D009	D007, D008	D008, D018	D018, D007	D001, D007, D008, D018	non-haz	non-haz	TSCA, 0018, 0008	D004, D005,D006,D007,D008,D009	D007,D008,D009	D005,D007,D008,D009,D011	D007, D008, D009	D008	D007,D008,D009	NA	NA	NA	NA	NA
Volume	500gzi	400gal	14 dr	10dr	3000gal	500gal	500gai	2000gal	500gat	1500gal	2500gal	16dr	9dr	110gal	110gal	110gal	110gal	110gal	500gal	MT	MT	MT	MT	MT
									157414			7.50							77.7					
1,1-Dichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	<1	nd	nd	nd	nd	<1	nd	ns.	nd	ns	ns	ns	nd	<1
Acetone	nd	nd	_nd_	nd	nd	nd	nd	nd	nd	nd	nd	nd	52.0	380.0	nd	nd	nd	ns	nd	ns	DS.	ns	63.0	nd
Carbon Disulfide	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	ns	nd	ns	ns	138	nd	nd
1,1-Dichloroethane	nd	nd	nd	nd.	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	DS.	nd	ns	10.8	ns	nd	nd
2-Butanone	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	738	nd	ns	ns	ns	nd	nd
Chloroform	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	<1	nd	nd	nd	nd	<1	nd	DS.	nd	ns .	ns	ns	nd	nd
Cyclohexane	nd	nd	nd	nd	nd	nd	1.2	0.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	11.5	nd	ns	DS	108	nd	nd
Benzene	3400.0	340.0	nd	76.0	1900.0	nd	nd	1.1	2.9	25000.0	<1	nd	2.9	nd	nd	<1	nd	វាន	nd	DS	. ns	ns.	nd	nd
Trichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.6	nd	ns	nd	ns	ns	108	nd	nd
Methylcyclohexane	nd	nd	nd	nd .	nd	0.69	2.6	1.9	1.9	nd	2.7	nd	nd	nd	nd	2.7	nd	ns	nd	пз	DS	DS	nd	nd
Methylene Chloride	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	26.0	nd	na	nd	ns	nd	ns	11.5	ns	16.0	<1
cis-1,3-Dichleropropene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	ns	nd	ns	ns	ns	nd	nd
Toluene	5100.0	480.0	nd	160.0	2900.0	0.44	_nd_	4.9	9.9	34000.0	6.5	nd	nd	nd	nd	6.5	, nd	ns	0.55	ns	ns	ns	nd	nd
Ethylbenzene	430.0	41.0	nd	nd	450.0	nd	0.81	5.7	6.3	2200.0	8.8	nd	nd	nd	nd	8.8	nd	ns	nd	ns.	. ns	ns	nd	nd
Xylenes(total)	3800.0	430.0	nd	180.0	2000.0	2.50	6.7	23.0	20.0	19000.0	80.0	nd	1.6	nd	nd	28.0	nd	118	nd	ns	ns	ns	nd	nd
Styrene	6000.0	nd	nd	120.0	2400.0	nd	nd	nd	nd	20000.0	nd	nd	nd	nd	nd	nd	nd	ns.	nd	ns	ns	ns	nd	nd
Isopropyibenzene	nd	2.8	nd	nd	nd.	nd.	nd	1.1	0.8	nd	4.2	nd	nd	nd	nd	4.2	nd	ns	nd	ns	TI\$	ns	nd	nd
I.A-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.4	nd	nd	nd	nd	ns	nd	ns .	ns	ns	nd	nd
1,2-Dichiorobenzene	nd	nd	_nd	nd	nd	nd	nd	nd	nd	nđ	nd	nd	1.0	nd	nd	nd	nd	ns	nd	ns	138	ns .	nd	nd
1,2,4-Trichlorobenzene	nd	3.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	23.0	nd	nd	nd	nd	ns	nd	ns	ns	ns	nd	nd
Arsenic	nd	nd	1.7	<1	2.2	3	7	<1	4.2	nd	nd	nd	nd	19.2	3.4	3	3	<1	2.3	, ns	ms	nd	ns	ns
Barium	16.5	12.2	<1	265	5.9	45	34.1	10.1	12.8	12.5	nd	<1	90.7	578	43.8	209	63.2	15.3	21.2	ns	ns	46	ns	ns
Cedmium	<1	<1	<1	<1	<1	<1	<1	nd	<1	<1	nd	<1	<	13.1	< Î	5.3	<1	<1	<1	ns.	ns.	1.2	TLS	ns
chrome	217	169	<1	165	26.1	20.5	18.2	2.8	24.3	183	<1	nd	7	1570	54.9	58	59.5	3.5	5.1	ns	ns	4670	113	ns
Lead	100	72	7.9	185	14.9	50.9	40.9	11.5	27.8	105	3.5	<1	67.5	3830	390	922	90.6	124	31.9	ns	ns	161	กร	ns.
Mercury Selenium	0.026	0.024	nd	0.046	0.012	0.21	0.42	0.032	0.034	0.017	nd	nd	0.11	2.8	0.38	0.64	0.26	nd	0.16	ns.	ns	0.19	ns	ns
Bilver	<1	<1	<1	4	nd	_nd	nd	nd	nd	<1	nd	nd	nd	1.7	<1	nd_	<1	nd	nd	ns	DB	23.3	ns	ns
Total PCB	<1	<1	1.7	<1	nd	<1	nd	nd	nd	<1	nd	<1	nd	6	<1	6.8	<1	nd	nd	13.5	១ន	<1	ns ns	ns
Tash Point	nd	nd	nd	nd	6.1	1.4	1.6	1.3	nd	nd	nd	nd	540	20	3.2	32	32	26	10	nd	nd	nd	nd	nd
	>140	>140	>140	>140	>140	>140	>140	>140	>140	70	>140		>140		>140		>140	>140	>140	ns	ns	ns	ns	118
Acenapthene	1200	1900	350	1200	670	nd	nd	98		1200	nd	nd	nd	nd	nd	nd	nd	DS	nd					
Acenapthylene Anthracene	12000	17000	67	11000	6300	nd	nd	49		9900	nd	nd	200	nd	.60	nd	49	D8	34					
	5100	9800	560	6700	3300	24	23	120		5100	nd	nd	190	nd	68	61	34	10.5	49					
Senzo (a) anthracene Senzo (a) pyrene	2600	4900	670	3500	2100	nđ	48	140		2600	nd	nd	110	nd	60	_nd_	62	ns	58					
Benzo (b) flouranthene	2300 1500	4100	83	3300	1800	45	26	90		2600	nd	nd	nd	nd	40	nd	39	ns	32					
Senzo (ghi) perylene	1200	3100	900	2400	1300	nd	nd	130		1900	nd	nd	54	nd	30	nd	41	ns	nd					
Senzo (k) flouranthene	nd	1900 nd	760 320	1400	700	nd	nd	46		1000	nd	nd	78	nd	20	nd	28	ns	nd					
,1 Biphenyl	3700	5200	76	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	ns	nd			· .		
is-2 (ethylhexyl) phalate	nd	nd		3300	2000	nd	67	140		3200	150	nd	220	nd	13	nd	nd	ns	nd					
aprolactam	nd	nd	nd 68	nd nd	nd 200	nd 190	<u>nd</u> 290	nd		nd	nd	nd	nd	nd	23	160	nd	ns	nd				1	
Carbazole	110	140	310	110	55	nd	290 nd	290 36		<u>nd</u> 95	nd	nd	nd	nd	nd	nd	nd	DS	nd					
Thrysene	2000	3800	680	3000	1500	67	88	150		2000	nd 89	nd	nd	nd 40000	nd	nd	9	DS.	nd					
libenz (a,h) anthracene	220	260	110	230	120	nd nd	nd	nd	·	200		nd	89	49000	87	89	120	DS	74					
ibenzofuran	760	1300	250	830	490	nd	nd	170			nd nd	nd	nd	nd	nd	nd	nd	10.5	nd					····
louranthene		10000	1800	6800	3800	45	48	460		670	nd	nd	nd	nd	nd	nd	nd	ns	nd .					
lourene	5300	9200	340	6500	3300	87	80	250		4700 5000	240	nd	240	nd	87	nd	100	ns	53					
leno (1,2,3-ed) pyrene	760	1200	550	930	490	nd nd	nd	39			220	nd	260	nd	63	62	nd	DS	71					
-Methylnapthalene		32000	480	19000	11000	nd	340	690		650	nd 2700	nd	nd	nd .	14	nd	16	ns .	200					
-Methylphenol	nd	nd	12	nd	nd	nd nd	nd	nd		19000	2700.	12	1300	nd	42	nd	27	DS .	nd			ļ		
apthalene		39000	440		16000	52	95	1800		nd	nd	nd	nd	nd	nd	nd	nd	ns	nd					
entaclorophenol	nd	nd	nd nd	nd	nd	nd nd	nd	1800 nd		37000	580	nd	nd	nd	39	nd	17	ns	37					
hananthrene		36000	1600		15000	96	250	700		nd	nd eac	nd	nd	nd	nd	350	nd	ns ns	nd					
henol	nd	nd	21	23000 nd						20000	840	nd	990		340	400	370	ns	290					
yrene		18000		15000	7700	nd 97	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	70.5	nd					
							nd	390		10000	nd	nd	390	nd	160	190	180	ns	130	[ïΓ		
3,4,6 Tetrachiorophenol	nd	nd	nd .	nd	nd	nd	nd	nd		nd	nđ	nd	nd !	nd	nđ	1100	nd	ns	nd					

nd: compound not detected above reporting limits ns: not sampled